



UNITED STATES DEPARTMENT OF COMMERCE
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770,238	APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
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09/770,238 01/29/01 SAEKI

EXAMINER
M 1080 10907J

021171
STAAS & HALSEY LLP
700 11TH STREET, NW
SUITE 500
WASHINGTON DC 20001

MMC2/0620

ART UNIT	PAPER NUMBER
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STERRETT, J.

4

DATE MAILED:
2838

06/20/01

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-40 is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-40 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The drawing(s) filed on 1/29/01 is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of Reference Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

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1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. Figures 1, 2^x, and 5-7[✓] should be designated by the legend ~~---Prior Art---~~ because only what was old and known in the art at the time of the invention is illustrated (See MPEP § 608.02(g)).
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a display unit displaying that the main synchronous rectifying switches are simultaneously turned on as recited by claims 2, 23, and 30 must be shown or the feature canceled from the claim. No new matter should be entered.
4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 15-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kuriyama et al (US 5,933,341).

7. Claims 1-14 and 22-35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kuriyama et al in combination with Weggel (US 5,646,837).

Kuriyama et al teaches a monitor circuit as recited by claims 1, 3-14, 22, 24-29, and 31-35 except for utilizing the monitor circuit in a DC-DC converter. Weggel teaches as old and known in the art at the time of the invention that DC-DC converters had the same short circuit or shoot through problems requiring some kind of monitoring. It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the old and known monitor circuit of Kuriyama et al to monitor an old and known DC-DC converter, such as taught by Weggel, in order to detect a short circuit or shoot through problem in a manner that was old and known in the art at the time of the invention.

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The DC-DC converter with monitor circuit as further recited by claims 2, 23, and 30 further sets forth a display unit displaying that the main synchronous rectifying switches are simultaneously turned on. Official notice is taken that it was an old and known expedient in the art at the time of the invention to display operational conditions, such as when switches are simultaneously turned on, of power converters that would be of concern to users of the power converters. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the DC-DC converter monitor circuit of Kuriyama et al and Weggel to include a display unit displaying that the main synchronous rectifying switches are simultaneously turned on since such was an old and known expedient in the art at the time of the invention.

8. Claims 36-40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kuriyama et al in combination with Weggel as applied above, and further in combination with any one of Morgan et al (US 3,376,492 or RE 27,128) or Ooba (US 6,175,511).

Kuriyama et al and Weggel collectively teach a DC-DC converter with a monitor circuit as recited by claims 36-40 except for specifying that the DC-DC converter comprises an inductor in series with a first switch. Morgan et al and Ooba both teach as old and known in the art at the time of the invention a DC-DC converter comprises an inductor in series with a first switch. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the DC-DC converter with a monitor circuit collectively taught by Kuriyama et al and

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Weggel by utilizing an inductor in series with a first switch of the DC-DC converter as taught by either Morgan et al or Ooba.

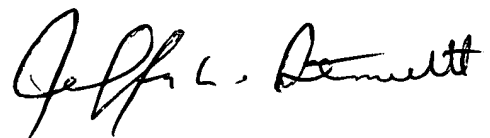
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Sterrett whose telephone number is (703) 308-1632. The examiner can normally be reached on Monday through Thursday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Wong, can be reached on (703) 305-3477. The fax phone number for this Art Unit is (703) 305-7723 and the fax phone numbers for this Group are (703) 305-3431 or (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

jls

June 14, 2001

A handwritten signature in black ink, appearing to read "Jeffrey L. Sterrett". The signature is fluid and cursive, with the last name "Sterrett" being more prominent.

Jeffrey L. Sterrett

Primary Examiner

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